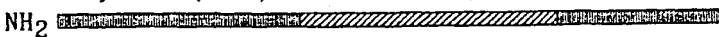






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<p>(51) International Patent Classification ⁷ : C12N 9/64, 15/57, 5/10, C07K 16/40, A61K 38/48, 48/00, 39/395, G01N 33/53</p>	A2	<p>(11) International Publication Number: WO 00/50580</p> <p>(43) International Publication Date: 31 August 2000 (31.08.00)</p>
<p>(21) International Application Number: PCT/CA00/00201</p> <p>(22) International Filing Date: 24 February 2000 (24.02.00)</p> <p>(30) Priority Data: 2,262,056 24 February 1999 (24.02.99) CA</p> <p>(71) Applicant (for all designated States except US): UNIVERSITE DE MONTREAL [CA/CA]; 2900 boulevard Edouard-Montpetit, Montreal, Quebec H3C 3J7 (CA).</p> <p>(72) Inventors; and (75) Inventors/Applicants (for US only): CRINE, Philippe [CA/CA]; 28 Avenue Claude-Champagne, Outremont, Quebec H2V 2X1 (CA). BOILEAU, Guy [CA/CA]; 7645 Malherbe, Brossard, Quebec J4Y 1E6 (CA).</p> <p>(74) Agents: DUBUC, Jean, H. et al.; Goudreau Gage Dubuc, The Stock Exchange Tower, Suite 3400, 800 Place Victoria, Montreal, Quebec H4Z 1E9 (CA).</p>		
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<p>(54) Title: COMPOSITION, METHODS AND REAGENTS FOR THE SYNTHESIS OF A SOLUBLE FORM OF HUMAN PHEX</p>		
<p>(57) Abstract</p> <div style="display: flex;"> <div style="flex: 1; padding-right: 10px;"> <p>This invention relates to a soluble form of PHEX, PHEX being a type II integral membrane glycoprotein. This enzyme is the gene product of a phosphate-regulating gene with homologies to endopeptidases on the X chromosome. To produce a soluble form of PHEX, the transmembrane anchor domain has been modified to encode a signal peptidase coding sequence. The soluble PHEX therefore comprises the active ectodomain. An inactive mutant of PHEX is also an object of this invention. Both soluble and inactive mutant forms of PHEX can be used to screen ligands to PHEX. These ligands can also be used as substrates or inhibitors of PHEX. PHEX being phosphaturic, an inhibitor thereof will be used to treat phosphaturia and/or hypophosphatemia. On the opposite, a substrate for PHEX or PHEX itself can be used to treat hyperphosphatemia.</p> </div> <div style="flex: 2;"> <div style="text-align: center; margin-bottom: 20px;"> <p>Cytosolic (19 aa) Transmembr. (20 aa) Ectodomain</p> <p>NH₂  1</p> <p style="margin-left: 300px;">POMC S.P.  2</p> <p style="margin-left: 300px;">A</p> </div> <div style="text-align: center;">  <p style="margin-left: 200px;">VGGTLVLGTLFLVSQGLLS 1</p> <p style="margin-left: 200px;">VLTVIAQQTTLFLVSQGLLS 2</p> <p style="margin-left: 200px;">VLTVIAQQT SQGLLS 3</p> <p style="margin-left: 300px;">B</p> </div> </div> </div>		